



# 1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95%

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 07/09/2016

Revision date: 14/09/2022

Supersedes: 07/09/2016

Version: 2.0

CNLM-9258

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Substance  
Substance name : 1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95%  
EC Index-No. : 613-111-00-X (Unlabeled)  
EC-No. : 206-022-9 (Unlabeled)  
CAS-No. : 1261170-82-4  
Product code : CNLM-9258  
Formula : \*C2H3\*N3

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Main use category : Professional use  
Industrial/Professional use spec : For professional use only

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302  
Eye Irrit. 2 H319  
Repr. 2 H361

Full text of hazard classes and H-statements : see section 16

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R22  
Xi; R36  
Repr.Cat.3; R62  
Repr.Cat.3; R63

Full text of R-phrases: see section 16

#### GHS-US classification

Acute Tox. 4 (Oral) H302  
Eye Irrit. 2A H319  
Repr. 2 H361

Full text of H statements : see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H302 - Harmful if swallowed  
H319 - Causes serious eye irritation  
H361 - Suspected of damaging fertility. Suspected of damaging the unborn child. (if inhaled, if swallowed)

Precautionary statements (CLP) :

P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective clothing, protective gloves.  
P301+P312 - IF SWALLOWED: Call a doctor if you feel unwell.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 - IF exposed or concerned: Get medical advice/attention.  
P330 - Rinse mouth.  
P337+P313 - If eye irritation persists: Get medical advice/attention.

#### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS08

GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H302 - Harmful if swallowed  
H319 - Causes serious eye irritation  
H361 - {0|message=Suspected of damaging fertility or the unborn child <state specific effect if known>|default=Suspected of damaging fertility or the unborn child|filter=^(\_)?H\_361.+} (Dermal, Inhalation, oral) (Dermal, Inhalation, oral)

Precautionary statements (GHS-US) :

P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P264 - Wash Both hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective clothing, protective gloves.  
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P330 - Rinse mouth.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P405 - Store locked up.  
P501 - Dispose of contents/container to Comply with applicable regulations

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95%	(CAS-No.) 1261170-82-4 (EC-No.) 206-022-9 (Unlabeled) (EC Index-No.) 613-111-00-X (Unlabeled)	100	Xn; R22 Xi; R36 Repr.Cat.3; R62 Repr.Cat.3; R63

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95%	(CAS-No.) 1261170-82-4 (EC-No.) 206-022-9 (Unlabeled) (EC Index-No.) 613-111-00-X (Unlabeled)	100	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Repr. 2, H361

Full text of R- and H- phrases: see section 16

Name	Product identifier	%	GHS-US classification
1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95% (Main constituent)	(CAS-No.) 1261170-82-4	100	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319 Repr. 2, H361

Full text of H-phrases: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.
First-aid measures after inhalation	: When symptoms occur: go into open air and ventilate suspected area. If not breathing give artificial respiration. Get medical advice/attention.
First-aid measures after skin contact	: Wash with plenty of soap and water. Get immediate medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Suspected of damaging fertility or the unborn child.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful in contact with skin. May cause moderate irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Suitable extinguishing agents: Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
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### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible.
Explosion hazard	: Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.
Reactivity	: Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 5.3. Advice for firefighters

Firefighting instructions	: Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Wear recommended personal protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid dust formation.
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### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow to enter drains or water courses. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal.  
Methods for cleaning up : This material and its container must be disposed of in a safe way, and as per local legislation.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation to minimize dust and/or vapor concentrations.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety practice.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place.  
Storage conditions : Store at room temperature away from light and moisture.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Appropriate engineering controls : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.  
Personal protective equipment : Gloves. Safety glasses. Protective clothing. Respiratory protection of the dependent type.



Materials for protective clothing : Wear suitable protective clothing and gloves.  
Hand protection : Wear suitable protective clothing and gloves.  
Eye protection : Wear eye protection. Chemical goggles or face shield with safety glasses.  
Skin and body protection : Wear suitable protective clothing, gloves and eye/face protection.  
Respiratory protection : In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator.  
Environmental exposure controls : Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid  
Appearance : Powder  
Molecular mass : 74.03 g/mol (Labeled)  
Color : White  
Odor : Odourless  
Odor threshold : No data available  
pH : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Melting point : 119 - 121 °C (246 - 250 °F) - lit.  
Freezing point : No data available  
Boiling point : 260 °C (500 °F) - lit.  
Flash point : 170 °C (338 °F)  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available

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Flammability (solid, gas)	: The product is not flammable. - Flammability (solids)
Vapor pressure	: 0.00215 hPa at 20 °C (68 °F) - Regulation (EC) No. 440/2008,
Relative vapor density at 20 °C	: No data available
Relative density	: 1.39 g/cm <sup>3</sup> at 20 °C (68 °F)
Solubility	: Water: 700 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - soluble
Log Pow	: -0.71 at 25 °C (77 °F) - OECD Test Guideline 107 - Bioaccumulation is not expected.
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive.
Oxidizing properties	: No data available
Explosion limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2. Chemical stability

Stable if stored under recommended conditions.

### 10.3. Possibility of hazardous reactions

Risk of explosion with: Silver. Violent reactions possible with: Strong oxidizing agents, Strong acids.

### 10.4. Conditions to avoid

Overheating.

### 10.5. Incompatible materials

Strong oxidizing agents. Strong acids.

### 10.6. Hazardous decomposition products

Carbon oxides, nitrogen oxides (NO<sub>x</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95% (1261170-82-4)	
LD50 oral rat	1320 mg/kg male and female - (OECD Test Guideline 401)
LD50 dermal rat	3129 mg/kg female - (OECD Test Guideline 402)
ATE CLP (oral)	1648.000 mg/kg body weight
ATE CLP (dermal)	3129.000 mg/kg body weight

Skin corrosion/irritation : Skin - Rabbit - Result: No skin irritation - 24 h (OECD Test Guideline 404)

Serious eye damage/irritation : Eyes - Rabbit Result: Irritating to eyes. - 72 h. (OECD Test Guideline 405)

Respiratory or skin sensitization : Maximisation Test . Guinea pig - Result: Does not cause skin sensitisation.

Germ cell mutagenicity : Test Type: Ames test  
Test system: S. typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

Test Type: In vivo micronucleus test  
Species: Mouse

Application Route: Oral  
Method: Mutagenicity (micronucleus test)  
Result: negative

Carcinogenicity : Not classified

Reproductive toxicity : Suspected of damaging the unborn child.

Specific target organ toxicity – single exposure : Not classified

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Specific target organ toxicity – repeated exposure	: Repeated dose toxicity - Rat - Females - Oral - NOAEL (No observed adverse effect level) - 54.2 mg/kg
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory tract irritation.
Symptoms/effects after skin contact	: May be harmful in contact with skin. May cause moderate irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95% (1261170-82-4)	
LC50 fish 1	760 mg/l static test LC50 - Oncorhynchus mykiss (rainbow trout) - 96 h (OECD Test Guideline 203)
EC50 Daphnia 1	> 494.7 mg/l static test EC50 - Daphnia magna (Water flea) - 48 h (OECD Test Guideline 202)
EC50 other aquatic organisms 1	45 mg/l static test EC50 - Pseudokirchneriella subcapitata - 72 h (OECD Test Guideline 201)
EC50 other aquatic organisms 2	> 1000 mg/l static test EC50 - Activated sludge - 3 h - (OECD Test Guideline 209)

### 12.2. Persistence and degradability

1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95% (1261170-82-4)	
Biodegradation	16 % aerobic - Exposure time 24 d (OECD Test Guideline 301A) - Not readily biodegradable

### 12.3. Bioaccumulative potential

1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95% (1261170-82-4)	
Log Pow	-0.71 at 25 °C (77 °F) - OECD Test Guideline 107 - Bioaccumulation is not expected.

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information	: No supplementary information available.
Special transport precautions	: DOT/IMDG/IATA: Not dangerous goods.

### Overland transport

No additional information available

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### Transport by sea

No additional information available

### Air transport

No additional information available

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

Special transport precautions : DOT/IMDG/IATA: Not dangerous goods.

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95% (1261170-82-4)	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard
SARA Section 313 - Emission Reporting	Not subject to reporting requirements of the United States SARA Section 313

### 15.2. International regulations

#### CANADA

1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95% (1261170-82-4)
Not listed on the Canadian DSL (Domestic Substances List)

#### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

1,2,4-TRIAZOLE (3,5-13C2, 99%; 1,2,4-15N3, 98%) CP 95%(1261170-82-4)	
U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No
State or local regulations	RTK - U.S. - Pennsylvania - RTK (Right to Know) List RTK - U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16: Other information

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Repr. 2	Reproductive toxicity Category 2
H302	Harmful if swallowed
H319	Causes serious eye irritation
H361	Suspected of damaging fertility or the unborn child
R22	Harmful if swallowed

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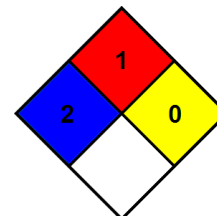
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R36	Irritating to eyes
R62	Possible risk of impaired fertility
R63	Possible risk of harm to the unborn child
Xi	Irritant
Xn	Harmful

NFPA health hazard	: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	: 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.



### Hazard Rating

Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 1 Slight Hazard
Physical	: 0 Minimal Hazard

### CIL Substance SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*